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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/878,978	06/19/97	LINDER S	D/97063

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2624	19

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/878,978	Stephen F. Linder
Examiner	**Group Art Unit**
King Y. Poon	2624

☒ Responsive to communication(s) filed on *Aug 22, 2000*

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *1-7* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-7* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pakenham et al. and Matsunawa.

Regarding claim 1: Pakenham teaches a system (fig. 1) for processing object (124, and 126 of fig. 1) oriented image data, comprising of a first parser circuit (122 fig. 1) to parse the object oriented image data into non-neutral image data (124 fig. 1) and neutral image data. (126 of fig. 1) Pakenham also teaches that the parsed image data (neutral and non-neutral) are subjected to further image processing. (Column 3 line 27-37)

Pakenham does not specify, in the further image processing for the parsed image data, to use a second parser circuit to parse the neutral image data into black image data, grey image data, and white image data; and a neutral color processing circuit to process only the black image data, grey image data, and the white image data.

However, Matsunawa, in the same area of image processing, teaches to process a neutral image data (see black and white picture elements of abstract) by using a parser circuit (11 of fig.

18, column 13 line 20-27) to parse the neutral image data into black image data, (see value 16 of fig. 2) grey image data, (values 2-15 of fig. 2) and white image data; (value 0 of fig. 3a) and a neutral color processing circuit (14 of fig. 18, and column 13 line 25-32) to process only the black image data, grey image data, and the white image data. (Fig. 7) The suggestion of doing so is to prevent Moire fringes while reproducing the processed image. (See column 2 line 33-37)

It is for this reason that at the time of invention that it would have been obvious to one of ordinary skill in the art to have modified the image processing system of Pakenham by using a second parser to parse the neutral image data into black image data, grey image data, and white image data; and a neutral color processing circuit to process only the black image data, grey image data, and the white image data, as taught by Matsunawa.

Regarding claim 3: Matsunawa teaches that the neutral processing circuit processes only the black, grey, and white image data according to a selected feature set. (See column 14 line 27-36)

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pakenham et al. and Matsunawa as applied to claim 1 above, and further in view of Robinson.

Regarding claim 2: Pakenham and Matsunawa have disclosed all of the claim limitations as recited in claim 1 except a black processing circuit to process only the black image data; a grey processing circuit to process only the grey image data; and a white processing circuit to process only the white image data.

Robinson, in the same area of using processors to process data, teaches the use of different processors to perform different tasks and each processor processes only a specific task. (See column 8 line 1-25) The suggestion of doing so is to improve on the speed and reduce the complexity of real time processor system cause by the use of a single processor to process multiple tasks. (See column 3 line 15-35)

It is for this reason that at the time of invention, it would have been obvious to one of ordinary skill in the art to have modified Pakenham and Matsunawa's image processing system by having a black processing circuit to process only the black image data; a grey processing circuit to process only the grey image data; and a white processing circuit to process only the white image data, as taught by Robinson. Therefore, it would have been obvious to combine Robinson, Pakenham and Matsunawa to obtain the invention as specify in claim 2.

4. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eschbach and Tai.

Regarding claim 4: Eschbach teaches a method (see fig. 1 and column 5 line 47-49) of processing object orient image data (see black pixel object, gray pixel object, and white pixel object of fig. 5 and color image object of column abstract) comprising the steps of: parsing a neutral image data (black and white of column 1 line 19) into black image data, grey image data, and white image data; and processing the black image data, grey image data, and the white image data. (See column 10 line 1-20) Eschbach also teaches that an image can be divided into color image data (non neutral image data) and black and white image data (neutral image data) (see

column 1 line 19), and that the color image data and black and white image pixel data are to be processed independently. (See color separation process for color image of abstract)

Since Eschbach teaches that an image can be divided into color image data (non neutral image data) and black and white image data (neutral image data), and that the color image data and black and white image pixel data is to be processed independently, at the time of invention, it would have been obvious to one of ordinary skill in the art that Eschbach teaches to parse the object oriented image data into non-neutral image data and neutral image data such that the non-neutral image data and neutral image data would be processed independently.

Eschbach does not specify to process the processed black image data, the processed grey image data, the processed white image data, and the non-neutral image data together.

Tai teaches to process a processed black image data, a processed grey image data, a processed white image data, and a color image data (the non-neutral image data) together (See # 90 of fig. 1) after processing the black image data, the grey image data, the white image data, and a color image data. The suggestion of doing so is to recombine all the processed image data such that the processed image would be printed (See fig. 1) Tai and Eschbach are combinable because they are from the same area of image processing.

Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art to have modified the image processing method of Eschbach by processing the processed black image data, the processed grey image data, the processed white image data, and the non-neutral image data together as taught by Tai for the purpose of printing a recombined image of

the non-neutral image and the neutral image. Without recombining the non-neutral image and the neutral image, the printed image would not have represented the original image. Therefore, it would have been obvious to combine Eschbach and Tai to obtain the invention as specified in claim 4.

5. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eschbach and Tai as applied to claim 4 and in further view of Meir et al.

Regarding claim 5: Eschbach and Tai have disclosed all of the claim limitations as recited in claim 4 except that the neutral color processing circuit processes only the black image data, the grey image data, and the white image data according to a selected feature set.

Meir teaches to process an image according to a selected feature set. (See column 6 line 55-60) Meir, Tai, and Eschbach are combinable because they are from the same area of processing data using a processor.

At the time of invention, it would have been obvious to one of ordinary skill in the art to have modified Eschbach's neutral processing circuit to process only the black image data, the grey image data, and the white image data according to a selected feature set, as taught by Meir. The suggestion of doing so can be reasoned by one of ordinary skill in the art because it would have allowed a user to selectively perform image processing operation on the image data, and thereby created a user desired image. Therefore, it would have been obvious to combine Meir, Tai and Eschbach to obtain the invention as specify in claim 5.

6. Claims 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tai, Pakenham et al. and Robinson.

Regarding claim 6:Tai teaches a system (see fig. 1 and column 5 line 47-49) for processing object orient image data (see black text object of # 70 of fig. 1) comprising: a rendering transform means (# 80 of fig.1) for transforming a color and color space of a color (see CMY of fig. 1) image and a black image (see K of fig. 1); and an image processing mean (# 90 of fig. 1) for processing the transformed image data together.

Tai does not teach a parsing mean for parsing the object oriented image data into non-neutral image data and neutral image data and a neutral rendering transform means for transforming the color space of only the neutral image data.

Pakenham teaches to use a parsing mean (122 of fig. 1) for parsing the object oriented image data into non-neutral image data (124, fig. 1) and neutral image data (126, fig. 1).

Robinson teaches the use of different processors to perform different tasks and each processor processes only a specific task. (See column 8 line 1-25) Robinson, Pakenham, and Tai are combinable because they are from the same area of processing data using a processor.

At the time of invention, it would have been obvious to one of ordinary skill in the art to provide a parser circuit in Tai's image processing system to parse the object oriented image data into non-neutral image data and neutral image data, as taught by Pakenham. The suggestion of doing so is to reduce the total amount of data being stored or processed by the image processing system. (See column 2 line 57-64 of Pakenham)

Moreover, it would have been obvious to one of ordinary skill in the art to have modified Tai's image processing system by having a neutral rendering transform means for transforming the color space of only the neutral image data for the purpose of having a processor to perform only the specific task of color transforming for the neutral image data as taught by Robinson. The suggestion of doing so is to improve on the speed and reduce the complexity of real time processor system cause by the use of a single processor to process multiple tasks. (See column 3 line 15-35 of Robinson)

Regarding claim 7: Tai teaches a parser circuit (70 of fig. 1) to parse a neutral image data into black image data, (see black pixel of fig. 2) grey image data, (see gray pixel of fig. 2) and white image data; (see white pixel of fig. 2) and a neutral color processing circuit (70 of fig. 1) to process the black image data, grey image data, and the white image data. (Fig. 2)

Tai does not teach to use different processors to perform the function of the neutral parsing means and the neutral image processing means. (70 of fig. 1)

However, Robinson teaches the use of different processors to perform different tasks and each processor processes only a specific task. (See column 8 line 1-25) The suggestion of doing so is to improve on the speed and reduce the complexity of real time processor system cause by the use of a single processor to process multiple tasks. (See column 3 line 15-35 of Robinson)

It is for this reason that at the time of invention, it would have been obvious to one of ordinary skill in the art to have modified Tai's image processing system by providing it with two

different processors to perform the functions of the neutral parsing means and the neutral image processing means.

REMARKS

7. Applicant's arguments with respect to claims 1-7 that Eschbach does not teach a circuit have been considered but are moot in view of the new ground(s) of rejection. Please see office action

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is (703) 305-0892 or to Supervisor Mr. David Moore whose phone number is (703) 308-7452.

DAVID MOORE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

October 31, 2000